

A proposed classification for orthodontic practice in India

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ABSTRACT

Aim and Background: Dental practice is blooming in India with many conventional and advanced setups providing orthodontic services. Orthodontics as a specialty has come to the forefront, as awareness of orthodontic therapy has increased. It is important to classify any health practice to understand, compare, and research the implications of various organizational setups in the country. It should possess the ability to chart the similarities and distinctions between different setups for ease of communication and patient awareness. Presently, there is no defined system that classifies the type of orthodontic practice in the country. Lack of any classification of the organizational setups makes it impossible to categorize or compare the various setups for research purpose, recognition of the dental personnel and facilities provided. This article aims to propose a simple 3-stage classification to orthodontic practices in India. **Technique:** Three-stage classification of orthodontic practice in group, type, and subtype gives a comprehensive coverage to all types of orthodontic setups in India. The group explains the center in three levels based on the armamentarium and services provided. The type explains the center in five levels based on ownership and scope of providing care. Finally, the subtype explains the availability and qualification of the operating personnel. **Conclusion and Significance:** This classification aims to provide a tool for communication and recording the levels of orthodontic care possible at any given center. It also facilitates continued study of its impact on practice efficacy and patient awareness.

Keywords: Indian orthodontics, orthodontics, orthodontic practice

Introduction

Inception of Indian orthodontics can be marked to the year 1935 when Dr. H. D. Merchant returned from Germany and delivered the first of lectures on orthodontics in Nair Hospital Dental College, Mumbai. He later formed a department of orthodontics in the same college and also was instrumental in establishing the

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initial Orthodontic practices in India and was termed a Father of Indian Orthodontics.^[1]

With 85 glorious years of orthodontics in India, the orthodontic practice has bloomed with increasing orthodontists every year^[2] and many general dentists practicing orthodontics with the knowledge gained in undergraduate course or by taking up orthodontic certificate courses under Private Academies.^[3,4]

It is essential to improve the people's awareness of malocclusion and its side effects on their oral and general health. A study by Bawankule *et al.*^[5] raises a number of questions on the existing oral health care delivery system and suggests strategizing

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reorganization of oral health programs to reduce the burden of oral diseases. There is also a need for improvement in infrastructure and personnel at urban primary centers for better utilization of dental care services.^[6] Even though there is an increase in the number of emerging orthodontic practice setups in India, research data found in the literature demarcating them is sparse. Lack of proper classification of practice types and orthodontic centers makes it difficult to accumulate or categorize research data regarding orthodontic practice.

It is important to classify any health practice aiming to understand, compare, and research the implications of various organizational setups in the country. It should possess the ability to chart the similarities and distinctions between different setups. With increase in number of orthodontic practitioners, it will be pivotal to chart the benefits and limitations of any setup.^[7] There exists a correlation between orthodontic treatment needs and oral health-related quality of life.^[8] Handelman *et al.*^[9] evaluated the patient satisfaction in different type of dental practice and related factors in old and young patients. They found that private dental practice was more satisfying but alternative type was also highly promising.

Similarly, Lewis and Campain^[10] also compared client satisfaction in two different types of practice and found community care center to be more accessible to clients. Such classifications are very useful for research and comparison of different types of practice and their direct and indirect effects on practitioner and patients.^[11-14] An ideal interface between primary and secondary dental care is pertinent to implement effective referrals and efficient treatment strategies.

Currently, practice of Orthodontics in India is not classified. The aim of the present article is to put forth simple classifications for better and simple understanding and communication or documentation of orthodontic practice type.

Materials and Methods

The classification is based on the hierarchical system of human resource structure and infrastructure availability.

A basic setup is considered when the center has a dentist equipped with the knowledge of diagnosing basic orthodontic problems and is able to provide primary care such as preventive orthodontics including patient education for developing orthodontic problems or space management due to early loss of deciduous teeth. General dental practitioners in these basic setups can also implement interceptive orthodontic treatment as part of primary care to prevent or reduce the severity of malocclusion in the permanent malocclusion.^[15] These setups may also have armamentarium such as basic diagnostic instruments (hand instruments, X-ray machine, etc.) for diagnosis and treatment of such conditions.

A comprehensive setup has the infrastructure, armamentarium (e.g. Basic diagnostic equipment and other

equipment and materials), and personnel (in house or on-call orthodontist) to perform most of the orthodontic care required (correction of all malocclusions with removable, fixed, or functional appliances). Such setups also provide basic or comprehensive care depending on the need of the patient. Complex or interdisciplinary treatment may not be attended in these setups.

Advanced orthodontic care centers are generally subunits of hospitals or institutes and are equipped with personnel and facilities (e.g. OPG, CBCT, and CT Scan) to diagnose and treat even complex orthodontic cases and multidisciplinary cases. They may have operation theatres and skilled personnel such as oral surgeons and trained professionals from other branches of dentistry to treat even surgical orthodontic cases and ortho-perio cases.

Classification: This classification involves 3 steps as described in Table 1.

Method of using the classification: The classification yields a code for any type of orthodontic practice which can be easily read, communicated, and recorded [Table 2].

Code has 3 data: first is upper case alphabet for group, second is a digit for type, and third is a lower case alphabet for subtype, for example; Code B3b means a secondary or comprehensive orthodontic care center which is a subunit of a private/corporate super-specialty providing a visiting or on-call orthodontic expert.

Table 1: Three steps of the proposed classification

Step 1: Group allocation based on the diagnostic and treatment services provided at the center in 3 tiers	
Group A	Preliminary or Basic Orthodontic Care Center
Group B	Secondary or Comprehensive Orthodontic Care Center
Group C	Tertiary or Advanced Orthodontic Care Center
Step 2: Type allocation based on ownership/management of the practice in 5 types	
Type 1	Government hospital or health care centers
Type 2	Educational Institutes or Colleges and their subunits
Type 3	Subunit of super-specialty private/corporate hospital
Type 4	Multicenter private or corporate dental/orthodontic clinics
Type 5	Self-owned or stand-alone private dental/orthodontic clinic
Step 3: Subtype allocation based on employment type of operating orthodontist/dentist in 3 subtypes	
Subtype a	In-house or fulltime orthodontist available
Subtype b	Visiting or on-call orthodontist available
Subtype c	Orthodontic treatment provided by resident dentist

Table 2: Method of using the classification

Group	Type	Subtype
A	1	a
B	2	b
C	3	c
	4	
	5	

Similarly, code A1a is a preliminary or basic orthodontic care center owned or managed by the government with in-house or fulltime orthodontic service. Code B5c indicates secondary or comprehensive orthodontic care center owned by the doctor as standalone private practice with operating resident dentist, so on and so forth.

Detailed description of groups, types, and subtypes

All the dental centers in India can be classified in many groups based on the level of care they provide to their patients. Ranging from basic diagnostic services to advanced multidisciplinary treatment for complex problems, grouping of the centers is done in 3 levels as follows:

Group A: preliminary or basic orthodontic care center comprises of a setup which is equipped with armamentarium to provide with basic services like diagnosis for orthodontic treatment needs and providing preliminary preventive or interceptive treatment. Lack of armamentarium may lead to referrals to higher groups. Such centers are best suited for screening patients and creating awareness regarding orthodontic treatment needs.

Group B: secondary or comprehensive orthodontic care center is well equipped with armamentarium and diagnostic facilities to diagnose and perform most of the orthodontic care required. Only minimal interdisciplinary or complex cases may be referred to higher group. Most orthodontic practices belong to this group and cover a large portion of orthodontic services being provided. They provide almost all type of orthodontic treatments and services including the ones provided in group A.

Group C: Tertiary or advanced orthodontic care centers are generally subunits of hospitals or institute with facilities to perform treatment of most complex orthodontic problems with interdisciplinary approach. They provide the services available at both groups A and B in addition to the advanced treatment. These centers are equipped with all armamentarium required for diagnosing and managing most complex orthodontic problems.

All groups of centers may be owned by either government or private dentist or corporate businessmen. Based on ownership and management, the clinics have varying scope for providing care and developing to higher centers and groups. Based on such scope, they can be classified on 5 types as follows:

Type 1: Government hospitals and health care centers usually have a dental wing or subunit which provides dental as well as orthodontic care. Such centers may range from preliminary center like Taluka hospital to advanced centers like government-run super-specialty hospitals like AIIMS. The scope for government setup is very high but undue reasons make it difficult to develop the government health care facilities in India.

Type 2: Education institutes and their subunits are mostly advanced centers which are best suited for correction of

interdisciplinary problems and complex problems. They can be both private and government-owned. These centers cater a huge population of patients as the treatment is mostly economic in such centers and done under the guidance of highly trained experts.

Type 3: Subunits of super-specialty private or corporate hospitals have a huge scope for armamentarium, funds, and skilled personnel which leads to providing tertiary care more often. But hospital with preliminary or secondary care may also be available at lower tiers of cities. Such hospital caters mostly the patients visiting the same for some other systemic problems.

Type 4: Multisite private or corporate dental/orthodontic clinics have boomed in India in last decade due to the huge revenue in the industry. They may be owned by dentist or any corporate management with multicenter setups providing secondary to tertiary care for orthodontic needs. They may be dental clinics or exclusive orthodontic setups with catering a huge group of patients. Such type of practices has a good scope to evolve into multistage multicenter setup providing holistic dental and orthodontic care.

Type 5: Private stand-alone dental/orthodontic clinics owned by the doctor are the most common type of dental setups which are common in all the tiers of cities in India. They cater mostly first two groups of care with monetary returns and have limited scope for development into tertiary centers. But such centers are more accessible to masses of the population and provide secondary care to high number of population. They are the most common choice of any dentist practicing in India.

Any group and type of centers provide orthodontic services to patient through dentist or orthodontist. Availability and educational qualification of operating dentist is further classified into subtype

Subtype a: includes any center with availability of in house or fulltime orthodontist who is trained with comprehensive and advanced skills to provide all groups of treatment and diagnostic services. Being in-house availability possesses an advantage of increased chairside time to each patient and may offer convenience and flexibility in appointment scheduling.

Subtype b: includes any group or type of center which has an orthodontist who is visiting the center weekly or monthly for stipulated period of time. Such centers have advantage of providing comprehensive or advanced care but chairside time available per patient may be compromised which in turn may lead to setback in selection of more advanced treatment option for patients. Referral to centers with subtype a services may be necessary for such procedures.

Subtype c: includes centers of any group and type which have operating dentist who is not an orthodontist or is under training for an orthodontic degree also have a great scope for providing

orthodontic care. Nonorthodontist dentist may practice orthodontic treatment of preliminary or secondary level based on their experience, undergraduate training, or any additional training gained there off. Advanced orthodontic care is very rarely provided by such operating dentist. Under training residents or postgraduate of orthodontics in educational institute also are under this subtype who can provide any level of orthodontic care but under the direct supervision of the trained teaching staff of the college. But such treatment can be time-consuming and may need frequent recalls and more chairside time for each patients as the operating dentist is under training.

Discussion

Classification of health care services is not very well-established in India. Orthodontic services being provided in the country at a large scale makes it necessary to have a tool to classify the practice in order to categorize the levels of services that need to be available at different types of practice. Presently existing in the country are traditional setups like private dental clinics and chain of orthodontic clinics. Orthodontic services are being provided by both government and private institutes and establishments. There is no literature proposing any classification of the existing orthodontic practices. Only one article has proposed a classification for dental group practices in journal of American dental association.^[5]

Classification systems make a tool to measure different type of setups on scales of patient and problem coverage and population being served. They also evaluate if any particular types of practices are more beneficial or some are more suited for community services.

Alphanumeric coded classification is widely used in field of healthcare services. This classification also uses the same method to categorize the orthodontic practices. As mentioned above in the methodology, the codes derived for different practice mark the type and scope of practice.

These codes segregate the orthodontic setups in different categories making it more standardized to evaluate the experience of operating doctors for the all the levels. In addition, the patients can expect the services provided at all setups based on their codes. It also gives the government and the national authority a chart to the entire establishment and provides specific guidelines for each type of practice. This is also useful for insurance providers to allocate or empanel various establishments based on their codes. Financing and pricing of the services can be established based on the levels and codes of practice. For research and epidemiological surveys also, it can be of great importance to have a coded classification.

Hence, this classification can be very useful at various levels of administrative and epidemiological purposes, assisting in data obtainment for research, recognition of the dental personnel, facilities provided, and in conduct of surveys.

This is an incipient proposal for classification of any dental health practice in India and has scope for further refinement.

Future scope: This classification could be used for making and implementation of health policies.

Conclusion

Classification of health services is not very simple. This classification provides tool for communication and recording the levels of orthodontic care possible at any given center. It also facilitates continued study of its impact on patients and practitioners alike.

Disclaimer

Authors does not compare or quantify the ability, skills, or knowledge of any undergraduate/dentist to orthodontic postgraduate/orthodontist, as with experiences and interest any dentist can gain skills and knowledge at par or beyond any orthodontist. Neither the authors intend to acknowledge the superiority of any setups above the other. This classification is merely for educational and research purpose.

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Conflicts of interest

There are no conflicts of interest.

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